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| EXAMINER |
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DEXTER, CLARK F

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| ART UNIT | PAPER NUMBER |
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3724

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02/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/780,323

Applicant(s)

SZYMANSKI, DAVID

Examiner

Clark F. Dexter

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-27, 29 and 30 is/are pending in the application.
- 4a) Of the above claim(s) 11, 17, 21, 22, 25-27, 29 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 12-16, 18-20, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on November 12, 2007 has been entered.

Claim Objections

2. Claims 15 and 18 are objected to because of the following informalities:

In claim 15, line 5, the recitation "wherein said cutting member and said seat surface consists" is improper, and it seems that --each-- should be inserted before "consists".

In claim 18, line 6, "an mating" is improper.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Rejections Over Wright:

4. Claims 1-3, 6-9, 12, 15, 18-20, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over one of Wright, pn 4,744,278 in view of Funakubo, pn 3,800,633.

Regarding claims 1-3, 6-9 and 12, Wright discloses a link for a saw chain with almost every structural limitation of the claimed invention including:

a base member (e.g., 52) adapted to be pivotally connected to other links of the saw chain (e.g., member 52 is "adapted" in that it has pivot openings 57 and is fully capable of being pivotally connected to other structure including various forms of other links), said base member comprising a seat surface having a first taper (e.g., the upper surface of 65 as viewed in Fig 7); and

a cutting member (e.g., 54) that comprises a cutting edge and releasably engages said base member, said cutting member including a surface having a second taper, wherein said first taper and said second taper extend at an angle ranging from about 0.5 to about 45 degrees relative to a direction of chain travel at a close tolerance effective to cause self-locking engagement of said first taper of said seat surface and said second taper of said cutting member surface;

[claim 2] wherein said close tolerance comprises no more than about 1 degree (as best understood);

[claim 3] wherein said close tolerance comprises no more than 0.5 degrees (as best understood);

[claim 12] wherein at least one of said cutting member and said base member comprises a water-resistant material applied by a process selected from the group consisting of steam treatment, resin infiltration, copper infiltration and loctite infiltration (e.g., the base material in Wright is disclosed as "investment case of hard, high strength

steel" which is a water-resistant material, and because the product is disclosed, the process by which the product is made is not critical).

Regarding claim 15, Wright discloses a **link** for a saw chain with almost every structural limitation of the claimed invention including:

a base member (e.g., 52) adapted to be pivotally connected to other links of the saw chain (e.g., member 52 is "adapted" in that it has pivot openings 57 and is fully capable of being pivotally connected to other structure including various forms of other links), said base member comprising a seat surface (e.g., the upper surface of 65 as viewed in Fig 7); and

a cutting member (e.g., 54) that comprises a cutting edge and releasably engages said seat surface of said base member.

Regarding claim 18, Wright discloses a **base member** (e.g., 52) with almost every structural limitation of the claimed invention including:

a seat surface (e.g., the upper surface of 65 as viewed in Fig 7) having a taper extending at an angle ranging from about 0.5° to about 45° relative to a direction of travel of the base member when fastened on the chain (e.g., the base member is fully capable of being positioned in such an orientation, particularly based on what structure it is attached/mounted), said taper having a close tolerance comprising no more than 0.5° to an mating taper of a cutting member (e.g., as best understood, particularly given that the cutting member is not part of the claimed base member);

Regarding claims 19, 20, 23 and 24, Wright discloses a **link** for a saw chain with almost every structural limitation of the claimed invention including:

a base member (e.g., 52) adapted to be pivotally connected to other links of the saw chain (e.g., member 52 is "adapted" in that it has pivot openings 57 and is fully capable of being pivotally connected to other structure including various forms of other links), said base member comprising a seat surface (e.g., the upper surface of 65 as viewed in Fig 7) having a first taper and a stop surface (e.g., the rightmost upper vertical surface as viewed in Fig. 7) located upstream of said seat surface relative to the direction of travel of the chain; and

a cutting member (e.g., 54) that comprises a cutting edge and releasably engages said seat surface of said base member, said cutting member including a surface having a second taper (e.g., at 66), wherein said first taper and said second taper extend at an angle ranging from about 0.5° to about 45° relative to a direction of chain travel at a close tolerance effective to cause locking engagement of said first taper of said seat surface and said second taper of said cutting member surface;

[claim 20] wherein said close tolerance comprises no more than 0.5 degrees (as best understood);

[claim 23] wherein said first taper and said second taper extend upwardly or downwardly from a location near said cutting edge in a direction opposite to said direction of chain travel;

[claim 24] wherein said angle is about 10 degrees or less.

Wright lacks the specific material designations for each of the base member and the cutter member, as follows:

[claim 1] the link of a saw chain wherein said surface has the second taper constructed from sintered and compacted particles of abrasion resistant material;

[claim 6] wherein said base member comprises sintered and compacted particles of abrasion resistant material;

[claim 7] wherein said abrasion resistant material comprises at least one of metal and ceramic;

[claim 8] wherein said abrasion resistant material comprises a carbide containing compound;

[claim 9] wherein said carbide containing compound comprises a compound selected from the group consisting of tungsten carbide, silicon carbide, tantalum carbide and aluminum carbide;

[claim 15] wherein said cutting member consists essentially of sintered and compacted particles of abrasion resistant material;

[claim 18] wherein said base member consists essentially of sintered and compacted particles of abrasion resistant material;

[claim 19] said cutting member comprises sintered and compacted particles of abrasion resistant material.

However, it is respectfully submitted that the use of such material on cutting teeth is old and well known in the art. For example, Funakubo discloses one example of a disclosure that discusses many of the claimed materials (e.g., see col. 1, the paragraph beginning at line 6) including the materials set forth in the subject claims, and teaches that these materials have been used for their known benefits including improved

durability and strength characteristics. Therefore, it would have been obvious to one having ordinary skill in the art to use the subject materials to make the cutters of Wright for the well known benefits including those described above.

Rejections Over Raetz:

5. Claims 1-3, 6-9, 13-16, 18-20, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over one of Raetz, pn 3,547,167 in view of Funakubo, pn 3,800,633.

Regarding claims 1-3 and 6-9, Raetz discloses a **link** (e.g., 3) for a saw chain with almost every structural limitation of the claimed invention including:

a base member (e.g., 5 including 6, 7) adapted to be pivotally connected to other links of the saw chain (e.g., member 5 is "adapted" in that it has pivot openings (through which components 4 extend) and is fully capable of being pivotally connected to other structure including various forms of other links), said base member comprising a seat surface (e.g., 7 including surfaces 18, 19; see also col. 3, lines 36-37) having a first taper; and

a cutting member (e.g., 9) that comprises a cutting edge and releasably engages said base member, said cutting member including a surface having a second taper, wherein said first taper and said second taper extend at an angle ranging from about 0.5 degrees to about 45 degrees relative to a direction of chain travel at a close tolerance effective to cause self-locking engagement of said first taper of said seat surface and said second taper of said cutting member surface;

[claim 2] wherein said close tolerance comprises no more than about 1 degree (as best understood);

[claim 3] wherein said close tolerance comprises no more than 0.5 degrees (as best understood);

Regarding claims 13 and 14, Raetz discloses every structural limitation of the claimed invention including:

a **saw chain** comprising a plurality of the quick change cutting links of claim 1;

[claim 14] wherein said saw chain is adapted for use on a saw comprising a chain saw, a timber harvester, a buck saw and a saw for cutting wood pallets.

Regarding claim 15, Raetz discloses a **link** (e.g., 3) for a saw chain with almost every structural limitation of the claimed invention including:

a base member (e.g., 5 including 6, 7) adapted to be pivotally connected to other links of the saw chain (e.g., member 5 is "adapted" in that it has pivot openings (through which components 4 extend) and is fully capable of being pivotally connected to other structure including various forms of other links), said base member comprising a seat surface (e.g., 7 including surfaces 18, 19; see also col. 3, lines 36-37); and

a cutting member (e.g., 9) that comprises a cutting edge and releasably engages said seat surface of said base member.

Regarding claim 16, Raetz discloses a **cutting member** (e.g., 9) for a saw chain with almost every structural limitation of the claimed invention including:

a cutting edge and an interior recess (e.g., the interior recess formed between surfaces 18 and 19) having a surface having a taper extending at an angle ranging from

about 0.5° to about 45° relative to a direction of travel of said cutting member when fastened on a chain (e.g., the cutting member is fully capable of being oriented at substantially any angle based on the type of operation desired by the user and based on any type or form of supporting structure provided therefor), said taper having a close tolerance comprising no more than 0.5° to a mating taper of a base member (e.g., as best understood, the cutting member is fully capable of having such a taper particularly given a suitable base member, wherein the base member is not part of the claimed cutting member).

Regarding claim 18, Raetz discloses a **base member** (e.g., 5 including 6, 7) for a saw chain with almost every structural limitation of the claimed invention including:

a seat surface (e.g., 7 including surfaces 18, 19; see also col. 3, lines 36-37) having a taper extending at an angle ranging from about 0.5° to about 45° relative to a direction of travel of the base member when fastened on the chain (e.g., the base member is fully capable of being positioned in such an orientation, particularly based on what structure it is attached/mounted), said taper having a close tolerance comprising no more than 0.5° to an mating taper of a cutting member (e.g., as best understood, the base member is fully capable of having such a taper particularly given a suitable cutting member, wherein the cutting member is not part of the claimed base member);

Regarding claims 19, 20, 23 and 24, Raetz discloses a **link** (e.g., 3) for a saw chain with almost every structural limitation of the claimed invention including:

a base member (e.g., 5 including 6 and 7) adapted to be pivotally connected to other links of the saw chain (e.g., member 5 is “adapted” in that it has pivot openings

(through which components 4 extend) and is fully capable of being pivotally connected to other structure including various forms of other links), said base member comprising a seat surface (e.g., 7 including surfaces 18, 19; see also col. 3, lines 36-37) having a first taper and a stop surface (e.g., one of the various surfaces as viewed in Fig. 1) located upstream of said seat surface relative to the direction of travel of the chain; and a cutting member (e.g., 9) that comprises a cutting edge and releasably engages said seat surface of said base member, said cutting member including a surface having a second taper, wherein said first taper and said second taper extend at an angle ranging from about 0.5° to about 45° relative to a direction of chain travel at a close tolerance effective to cause locking engagement of said first taper of said seat surface and said second taper of said cutting member surface;

[claim 20] wherein said close tolerance comprises no more than 0.5 degrees (as best understood);

[claim 23] wherein said first taper and said second taper extend upwardly or downwardly from a location near said cutting edge in a direction opposite to said direction of chain travel;

[claim 24] wherein said angle is about 10 degrees or less.

Raetz lacks the specific material designations for each of the base member and the cutter member, as follows:

[claim 1] the link of a saw chain wherein said surface has the second taper constructed from sintered and compacted particles of abrasion resistant material;

[claim 6] wherein said base member comprises sintered and compacted particles of abrasion resistant material;

[claim 7] wherein said abrasion resistant material comprises at least one of metal and ceramic;

[claim 8] wherein said abrasion resistant material comprises a carbide containing compound;

[claim 9] wherein said carbide containing compound comprises a compound selected from the group consisting of tungsten carbide, silicon carbide, tantalum carbide and aluminum carbide;

[claim 15] wherein said cutting member consists essentially of sintered and compacted particles of abrasion resistant material;

[claim 16] wherein said cutting member consists essentially of sintered and compacted particles of abrasion resistant material;

[claim 18] wherein said base member consists essentially of sintered and compacted particles of abrasion resistant material;

[claim 19] said cutting member comprises sintered and compacted particles of abrasion resistant material.

However, it is respectfully submitted that the use of such material on cutting teeth is old and well known in the art. For example, Funakubo discloses one example of a disclosure that discusses many of the claimed materials (e.g., see col. 1, the paragraph beginning at line 6) including the materials set forth in the subject claims, and teaches that these materials have been used for their known benefits including improved

durability and strength characteristics. Therefore, it would have been obvious to one having ordinary skill in the art to use the subject materials to make the cutters of Wright or Raetz for the well known benefits including those described above.

Further Rejections Over Wright or Raetz:

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Wright, pn 4,744,278 in view of Funakubo, pn 3,800,633 or the combination of Raetz, pn 3,547,167 in view of Funakubo, pn 3,800,633 as applied to claim 1 above, and further in view of any one of Ackley, pn 2,725,083 or Abbott, pn 2,873,775 or Oehrli, pn 3,144,059 or Ehlen, pn 3,308,859 or Carlton, pn 4,901,613.

Each combination lacks:

[claim 5] wherein said base member comprises stamped metal.

However, the Examiner maintains the taking of Official notice that such materials are old and well known in the art and provide various well known benefits including superior strength and durability. Ackley (col. 2, lines 51-53), Abbott (col. 2, lines 9-11), Oehrli (col. 8, lines 43-44), Ehlen (col. 2, lines 41-43) and Carlton (col. 3, lines 60-61) each disclose examples of links having components made from stamped metal. Therefore, it would have been obvious to one having ordinary skill in the art to use the subject materials to make the cutters of Wright or Raetz for the well known benefits including those described above.

It is noted that the common knowledge or well-known in the art statement of the previous office action has been taken to be admitted prior art because applicant

either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. See MPEP § 2144.03.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Wright, pn 4,744,278 in view of Funakubo, pn 3,800,633 or the combination of Raetz, pn 3,547,167 in view of Funakubo, pn 3,800,633 as applied to claim 1 above, and further in view of any one of Dawson, pn 3,023,490 or Gaddis et al., pn 4,750,396.

Each combination lacks:

[claim 10] wherein said abrasion resistant material comprises a tool steel alloy.

However, the Examiner maintains the taking of Official notice that such materials are old and well known in the art and provide various well known benefits including superior strength and durability. Dawson (e.g., see the claims, particularly claims 4 and 21) and Gaddis (see the abstract) each disclose examples of cutting members comprising tool alloy steel. Therefore, it would have been obvious to one having ordinary skill in the art to use the subject materials to make the cutters of Wright or Raetz for the well known benefits including those described above.

It is noted that the common knowledge or well-known in the art statement of the previous office action has been taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate. See MPEP § 2144.03.

Response to Arguments

8. Applicant's arguments filed November 14, 2007 have been fully considered but they are not persuasive.

In the first paragraph on page 8 of the subject amendment, applicant argues that

"Wright fails to disclose many features of the claimed invention. That is, with reference to claims 1, 18 and 19, Wright fails to disclose or suggest a base member adapted to be pivotally connected to other links of the saw chain. In this respect, the Examiner attempts to equate the clevis (52) of Wright as a base member. However, if this is so, the clevis of Wright clearly is NOT adapted to be "pivotally connected to other links". Rather, the clevis of Wright is pivotally connected to shoulders (47) of the sawplate (42) by a pin (56). In fact, because Wright does not disclose a saw chain, but rather a circular saw, there is only a sawplate. Thus, there are not even any "other links" that the clevis can be connected to."

It is respectfully submitted that the Examiner disagrees with applicant's analysis. First, the Examiner's position is NOT that the base member of Wright IS pivotally connected to other links of a saw chain. Rather, the Examiner's position is that the base member of Wright is ADAPTED TO BE pivotally connected to other structure including other links of various types or forms.

In the first paragraph on page 9 of the subject amendment, applicant argues that

"Raetz does not disclose a tapered surface in the interior passage of its cutting sleeve."

The Examiner respectfully disagrees with applicant's conclusion in that Raetz discloses a tapered surface that meets the claim limitations as further described in the corresponding prior art rejection above.

In the second paragraph on page 9 of the subject amendment, applicant argues that

"Second, and with respect to all of the claims, such a proposed combination does not disclose or suggest wherein the first and second taper have a close tolerance comprising no more than 0.5°. As detailed in the present application, one manner in which this close tolerance can be achieved is by forming the cutting member from sintered and compacted particles of abrasion resistant material. Although other methods of achieving such close tolerances are known, Raetz provides absolutely no suggestion or disclosure of such tight tolerances or how they may even be achieved."

The Examiner respectfully disagrees with applicant's position. It is respectfully submitted that the prior art teaches a structural configuration wherein the components have a substantially perfect fit. Tolerance issues are for the most part manufacturing considerations and thus are not typically discussed by the prior art (unless, of course, the focus of the invention is directed to tolerance issues).

With respect to applicant's arguments directed to the material, applicant's arguments have been considered. However, it is respectfully submitted that Examiner disagrees with applicant's position concerning what is known/taught in the prior art.

Conclusion


9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clark F. Dexter whose telephone number is (571)272-4505. The examiner can normally be reached on Mondays, Tuesdays, Thursdays and Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer D. Ashley can be reached on (571)272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Clark F. Dexter
Primary Examiner
Art Unit 3724

cf
January 29, 2008